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CENTRAL INTELLIGENCE AGENCY REPORT

INFORMATION REPORT

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SUBJECT Transistor Development at VEB Werk fuer Bauelemente der Nachrichtentechnik "Carl von Ossietzky", Teltow

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THIS IS UNEVALUATED INFORMATION

Development work conducted at the VEB Werk fuer Bauelemente der Nachrichtentechnik "Carl von Ossietzky" (formerly the Dralowid plant) in July 1954 included:

a. Development of transistors which [redacted] done at the HF [redacted] Telecommunication Engineering Plant under the supervision of Dr. Hans Boehm was discontinued at this enterprise and transferred to Dr. Matthies Falter's laboratory at the Dralowid Plant. Dr. Falter developed transistors on a germanium basis with an admixture of indium. This development work was scheduled [redacted] completed by the end of October 1954. Technical specifications for this type of transistor included:

Voltage	:	50 to 100 V
Power output	:	up to 20 mW
Input level		
Eingang Pegel	:	200 mV
Limit frequency	:	1 to 3 Mc.
Amplification	:	30 to 100 [redacted]
Sensitivity	:	50 to 60 db (power resistance in relation to noise resistance measured at the equivalent input resistance)

b. Development of two types of transistors for oscillators and amplifiers. It was also intended further to develop these transistors for frequencies from 5 to 10 Mc.

c. Development of germanium diodes in which the inverse voltage and the pass voltage (Durchlass-Spannung) were to be at a ratio of 1:1,000 at a current intensity of 10 mA. It is intended to develop two types of diodes, one for 2 and one for 5 mA. The inverse voltage is 120 V.

d. Experiments to manufacture resistances which have a boron-treated carbon layer. These resistances are believed to be much more efficient and much easier to manufacture. Moreover, they are much more sensitive to humidity than [illegible] resistances. Their temperature coefficient is [illegible]. Capillar resistances with up to 100 kilo-ohm designed as impulse resistances with a dielectric strength to handle 20 kV were also developed.

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c. Manufacture of miniature transformers from special raw materials. Laminations (Texturbleche), 0.3 mm thick, were used for these miniature transformers. These sheets, which were delivered by the Steel Works at Thale, were not suitable for higher frequencies.

2. It was learned that the Ceramic Works at Hermsdorf developed small condensors which utilized titanates. This development work was supervised by Grahl (fnu). These condensers are said to have a high dielectric strength, a low temperature coefficient, and a good dielectric coefficient.

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